



NSW DEPARTMENT OF
PRIMARY INDUSTRIES



Partners in the profitable and sustainable development of
agriculture, fisheries, forests and minerals in New South Wales

Division of Science and Research

IPDM for low chill stonefruit



Integrated Pest and Disease Management

Evaluate your pest and disease problem and apply the most appropriate solution; but remember.....

- Know your orchard's pests and diseases
- Anything you do will impact on the entire block
- Don't create problems which you'll have to chase later
- Try to prevent problems before they arise
- Sometimes chemicals are the best solution; sometimes not.
- Remember your health and your family's
- KEEP RECORDS





Pest and Diseases – “Low Chill is different”

A range of problems unique to low chill

Grey headed flying fox

All Important

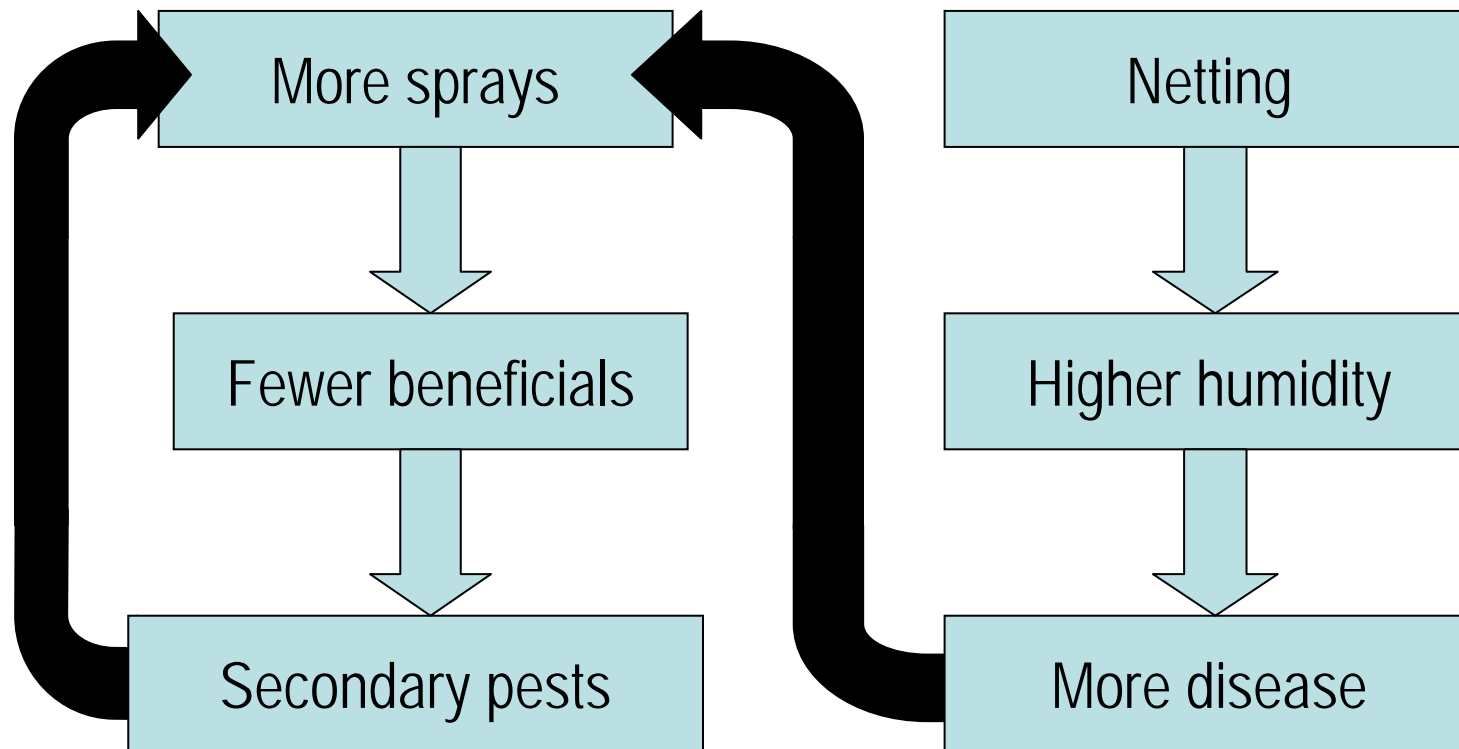
Queensland fruit fly

All have secondary effects

White peach scale



The secondary effects: A pessimistic view





Low Chill and other stone fruit – a lot in common

Most pests and diseases are
Common to low and high chill
regions



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Fruit fly control as a starting point

Chemical name	Trade name	Predatory mites			Parasitoids		Predator
		Phytoseiulus persimilis	Typhlodromus occidentalis	Amblyseius spp	Aphidius colemani	Trichogramma wasps	Green lacewings
Fenthion	Lebaycid	☠	☠	?	?	☠	☠
Dimethoate	Rogor	☠	☠	☠	☠	☠	☠
Trichlorfon	Dipterex	☠	?	☠	☠	☠	?

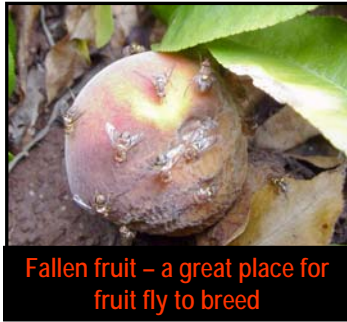


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Low Chill and IPDM – Fruit fly, babies and bath water

Fruit fly



Fallen fruit – a great place for fruit fly to breed



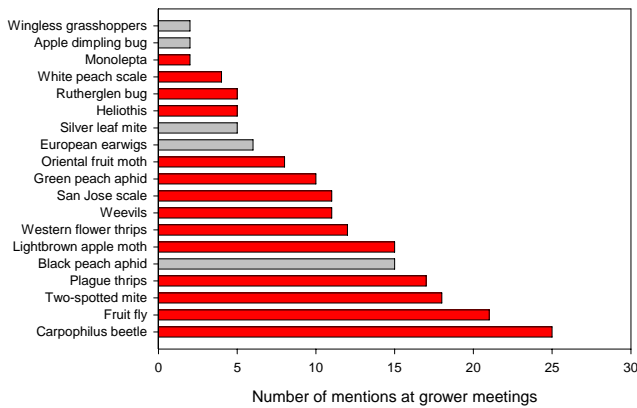
Monitoring A Lynfield trap

- Bait sprays
- Remove unwanted trees
- Don't bury fruit



Insect pests - How does Low Chill compare?

Insect pests



Inland low chill area specific pests include

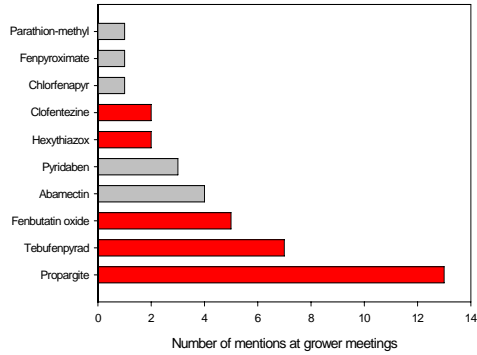
- Carpophilus
- Western flower thrips
- Fuller's rose weevil





Insect pest control - How does Low Chill compare?

Two spotted mite

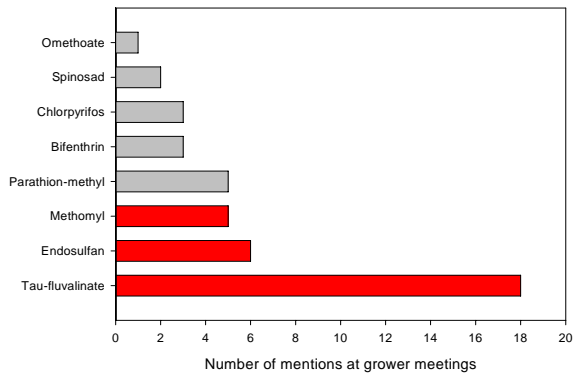


Propargite	Omite	☺
Tebufenpyrad	Pyranica	☺
Fenbutatin oxide	Torque	☺
Hexythiazox	Calibre	☹
Clofentezine	Apollo	☺



Insect pest control - How does Low Chill compare?

Thrips

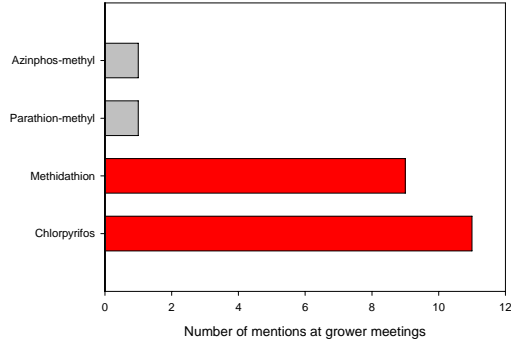


Tau-fluvalinate	Mavrik	☹
Endosulfan	-	☹
Methomyl	Lannate Nudrin	☹



Insect pest control - How does Low Chill compare?

Scale

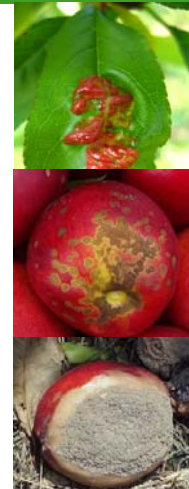
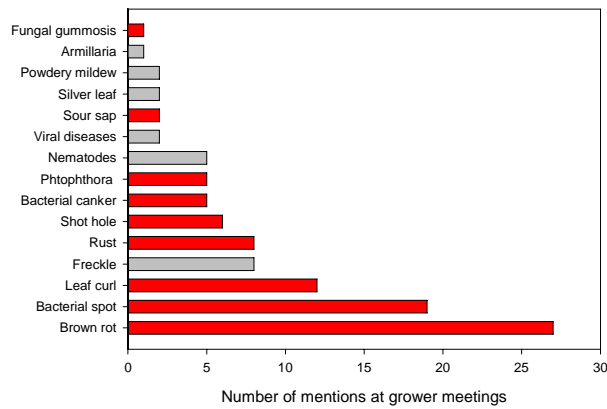


Dormant oils common

Methidathion	Supracide	⊗
Chlorpyrifos	Lorsban	⊗



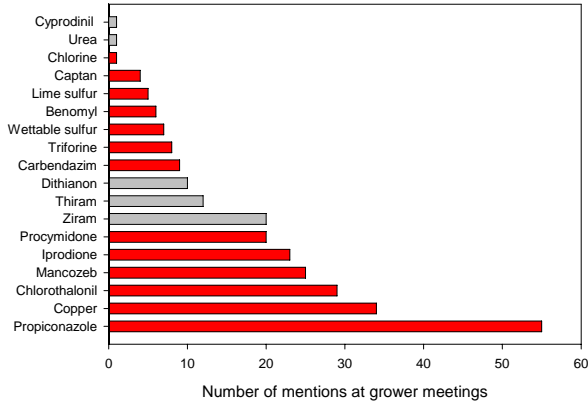
Diseases - How does Low Chill compare?





Disease control - How does Low Chill compare?

Brown rot and blossom blight



Cyprodinil	Chorus	
Captan	Orthocide etc.	
Lime sulfur	-	
Benomyl	Benlate	
Triforine	Saprol	
Carbendazim	Spin etc.	
Dithianon	Delan, Patrol	
Thiram	Thiragranz	
Ziram	Ziragranz	
Procymidone	Sumisclex etc	
Iprodione	Rovral etc	
Mancozeb	Dithane etc	
Chlorothalonil	Bravo etc	
Propiconazole	Tilt etc	



Disease control - How does Low Chill compare?

Bacterial diseases

- Slightly more serious in Low Chill regions
- Bacterial spot the major problem
- Coppers



Bacterial spot



Bacterial canker

Good Management

- Varieties
- Beneficial insects
- Effects of netting
- Fungicide resistance groups
- Pruning, spray penetration and disease
- High volume oil sprays
- Removal of mummies
- Orchard floor hygiene
- Area wide management
- Poultry in the orchard
- Removal of all fruit
- Pruning out diseased material
- Avoiding sunburn
- Drainage
- Baiting and trapping
- B.t. (e.g. DiPel)
- Migration from nearby crops
- Mating Disruption
- Release of persimilis
- Weed control and sward management

Low chill, pests and diseases – a Summary

- Most pests and diseases are the same as the rest of industry
- Some are different (eg. peach white scale); these are usually difficult to control
- Fruit fly control limits the action of beneficials
- Most chemical control is similar to the rest of industry
- Choose ‘IPDM-friendly’ chemicals where they are effective and available
- Lots of ‘IPDM-friendly’ non-chemical controls used

IPDM for low chill stone fruit

